

## 5.1 Tallgrass Prairie (Red River Valley)

**Area:** 4,630,000 acres (1,874,000 ha)

**Description and Overall Condition:** This landscape component consists of the tallgrass prairie, and associated wetlands, historically found predominantly in the eastern one-fourth of North Dakota. The Red River of the North (see section 5.7.b for information on this focus area) forms the state line between North Dakota and Minnesota. This region today is commonly referred to as the Red River Valley. Until just 10,000 years ago, a large glacial lake named Lake Agassiz covered this region. The flat topography and rich soil of the glacial Lake Agassiz basin provides for excellent but intensive agricultural production including potatoes, beans, sugar beets, corn and wheat. By the 20<sup>th</sup> century, much of the tallgrass prairie had been converted to farmland. Few tracts of native vegetation remain in this region today. Places where small natural areas remain intact are remnants of Lake Agassiz. The shoreline of Lake Agassiz created diagonal striations of sand and gravel a few feet high that are still visible in aerial and satellite imagery today. These beach ridges are one component of the focus area “Sand Deltas and Beach Ridges” in conjunction with several large fan-shaped deltas of sand formed from Agassiz. Saline areas of unsuitable farmland due to the high salt concentration of the soil remain intact. The largest continuous area just west of Grand Forks is another focus area, the “Saline Area.” The Red River Valley has few wetlands compared to the mixed-grass prairie to the west, with roughly 150,000 total wetland basin acres. Farmland with woodlot and shelterbelt plantings is now prevalent, particularly in Grand Forks County.

### Predominant Natural Vegetation:

Grasses: big bluestem, little bluestem, switchgrass, Indiangrass, prairie dropseed, slender wheatgrass, porcupine grass, mat muhly, fescue sedge, meadow sedge

Forbs: western prairie-fringed orchid, blue-eyed grass, meadow anemone, prairie cinquefoil, wild licorice, prairie blazing star, tall goldenrod, black-eyed susan, white sage

### Associated Species of Conservation Priority:

Birds	Mammals	Reptiles/Amphibians
American Bittern Northern Pintail Northern Harrier Sharp-tailed Grouse Greater Prairie-chicken Willet Upland Sandpiper Marbled Godwit Wilson's Phalarope Short-eared Owl Sedge Wren Grasshopper Sparrow Le Conte's Sparrow Nelson's Sharp-tailed Sparrow Dickcissel Bobolink	Pygmy Shrew Arctic shrew Plains Pocket Mouse Richardson' Ground Squirrel	Canadian Toad Northern Prairie Skink Smooth Green Snake Western Hognose Snake

### Other Characteristic Wildlife:

Birds: mallard, blue-winged teal, red-tailed hawk, American kestrel, ring-necked pheasant, killdeer, Eastern kingbird, Western kingbird, American crow, common yellowthroat, clay-colored sparrow, vesper sparrow, Savannah sparrow, Henslow's sparrow, Western meadowlark, brown-headed cowbird,

Mammals: Northern short-tailed shrew, white-tailed jackrabbit, snowshoe hare, Franklin's ground squirrel, thirteen-lined ground squirrel, Northern pocket gopher, plains pocket gopher, Western harvest mouse, deer mouse, Northern grasshopper mouse, prairie vole, meadow vole, meadow

jumping mouse, Western jumping mouse, coyote, red fox, raccoon, badger, striped skunk, white-tailed deer, moose

Reptiles and Amphibians: American toad, Great Plains toad, Northern leopard frog, chorus frog, tiger salamander, plains garter snake, common garter snake

### 5.1.a Focus Area: Saline Area

**Area:** 200,000 acres (83,000 ha)

**Public Landholdings:** 11,600 acres (NDGFD 4,100; NDSLD 1,800; USFWS 5,700)

**Description and Condition:** This area is characterized by saline soil due to salty ground water flowing to the surface from underlying sandstone. This land is mostly unsuitable for crop farming and grazing occurs in most areas that are not cultivated. Salt-tolerant plants occur and many of the wetlands are brackish in nature. This area includes several larger tracts (>640 acres) of native tallgrass prairie. The majority of this area is not protected with an easement. Landowners appear willing to work with conservation agencies or groups to protect this rare area. The Grand Forks County Prairie Partners advocates preservation of this rare ecosystem. A major threat includes urban expansion as most of this area is within 15 miles of Grand Forks.

**Key Species of Conservation Priority**

Birds: greater prairie-chicken, upland sandpiper, sedge wren, Le Conte's sparrow

### 5.1.b Focus Area: Sand Deltas and Beach Ridges

**Area:** 914,000 acres (370,000 ha)

**Public Landholdings:** 83,750 acres (NDGFD 5,800; NDSLD 500; NDFS 450; NDPRD 1,400; USFWS 3,600; USFS 72,000)

**Description and Condition:** Thick sand deposits from river sediments carried to glacial Lake Agassiz form windblown sand dunes, the largest being the Sheyenne delta in the southern portion of the Red River Valley. Beach ridges of parallel lines of sand and gravel are more prevalent in the northern portion, along with a smaller delta east of the Pembina Hills. Some agriculture, including irrigation, is taking place in the deltas and around the beach ridges. This focus area contains the Sheyenne National Grasslands which is approximately 72,000 acres in size and is managed by the USFS, making this the largest publicly owned tallgrass prairie preserve in the United States (Martin and Svingen, 2003). Oak savannah occurs in the delta areas. The Sheyenne River runs through the deltas (see section 5.7.c for information on this focus area). Overall, the USFS land is in suitable condition, although there are areas of overgrazing. Stands of privately owned native tallgrass prairie adjacent to the SNG are not protected by easements or other conservation.

**Key Species of Conservation Priority**

Birds: greater prairie-chicken, sharp-tailed grouse, short-eared owl, upland sandpiper, sedge wren, Le Conte's sparrow

Mammals: plains pocket mouse

Reptiles and Amphibians: Northern prairie skink, Western hognose snake



*Sand hills in southeastern North Dakota.*

### 5.1.c Conservation Problems and Actions for the Tallgrass Prairie (Red River Valley)

TALLGRASS PRAIRIE (Red River Valley)				
CONSERVATION PROBLEM	CONSERVATION ACTION	POTENTIAL PARTNERS		
Direct Loss of Habitat				
Very little native tallgrass prairie remains.	Protect native tallgrass prairie where possible. Sites within the Saline Area and Sand Deltas or Beach Ridges are of high priority (e.g. easements or land acquisition)	NDGFD USFWS USFS NRCS PPJV	NDNRT DU TNC Audubon PF	Private Landowners  GFAFB UND
Urban development around larger cities, particularly Fargo and Grand Forks.	Work with city planners to conserve existing native tallgrass prairie.	NDGFD Grand Forks Fargo		
Habitat Fragmentation				
Highly fragmented with roads, shelterbelts, and agricultural practices.	Consider removal of dilapidated shelterbelts or stands of trees within grassland, particularly within 50 meters of grassland patches >100 ha.	NDGFD USFWS USFS NRCS PPJV	TNC	Private Landowners  Volunteers
Habitat Degradation				
Improper grazing practices.	Implement grazing systems to benefit tallgrass species.	NDGFD NDSLD USFWS USFS NRCS PPJV	DU TNC	Private Landowners  NDSUEXT
Loss of fire regime.	Work cooperatively with state and federal agencies to develop BMPs that promote use of fire.	NDGFD NDSLD USFWS USFS NRCS	TNC	
Long term haying of native prairie.	Find alternative hay sources (e.g. grass banks)	No partners identified.		
Invasive and Noxious Species				
Leafy spurge of great concern, particularly in and around the SNG.	Control noxious weeds through biological and chemical methods.	NDGFD NDSLD USFWS USFS NRCS	NDWCA	Private Landowners NDSUEXT
Woody encroachment.	Use fire or other tools to prevent woody invasion of grassland.	NDGFD NDSLD USFWS USFS NRCS	TNC	
Pesticides				
Pesticide drift and application.	Work with state and federal agencies to enforce existing pesticide regulations.	NDGFD NDDAG USFWS USFS		Private Landowners

TALLGRASS PRAIRIE (Red River Valley)				
CONSERVATION PROBLEM	CONSERVATION ACTION	POTENTIAL PARTNERS		
Industrial Development				
Wind energy potential is fair to good.	Coordinate with wind energy companies to minimize impacts.	NDGFD USFWS	WIND NDSEED	
Data Gaps				
Lack of baseline information on SoCP.	Survey areas of data gaps. Conduct research/surveys to establish baseline information on SoCP.	NDGFD NDSLD USFWS USFS NPWRC PPJV	DU TNC	Volunteers Universities
Conservation Awareness				
Continuing education.	Create informational brochures, use tools such as television, radio, newspapers, magazines, and public forums, to provide information to citizens on the need for conservation of fish and wildlife resources and habitat.	NDGFD USFWS USFS NRCS	DU TNC Audubon	NDSUEXT